All-star-battle

This is a documentation and tutorial that will help you to know
what is this program is.
Under the folder:src/main/java/com/kenny/AllStarBattle, there are main
Classes and packages. Among all, AllStarBattleApp is the main class to
run this game.

How to run it:
1.Make sure you have installed package:FXGL
2.Make sure you can connect to database.
 In the class "JdbcUtils.java", here are some mark to you. You need to
change PASSWORD to your
own database's password,as well as your USER_NAME. After that, look at URL.
There is something
like
"jdbc:mysql://localhost:3306/cs1004?allowPublicKeyRetrieval...",replace
"cs1004" with your
database's name. As a result, you can connect your database.
3. Open "com.kenny.AllStarBattle.AllStarBattleApp". This is the main
function where you can run the whole game.
4. You can also try to play the game by running
"out/artifacts/tank_jar/tank.jar"

Main features:
      (1). Different entities and attacking methods.
   We achieve this by using the key class "TankComponent" to enable player
and enemy to move freely.
      (2). Customed pictures, sound,UI.
   Using PNG file and javafx, fxgl to replace the origional textures. UI is
included in UIpackage.
      (3). Random enemy and props.
   Using random 2D position to achieve. Props will have effect to entity
who "eat" them.you can find
   how to achieve that by checking "PropsPlayer"class in collision package
in detail.
      (4). Some cool modes

I leave some Easter egg in the game to show respect to my
classmates&friends, as well as one famous singer(hhhh).
    You can find them by checking database and during playing(kill chicken
firstly)

Some more detailed description to packages:

1. AllStarBattleApp: we firstly initialize the game, like Width and Height,
Title... Then we customize our scene by creating SceneFactory. By override
onPreInit,
we can add music to the game. There are two start level methods: Start
normal level and
hidden level, which will create enemy for specific time interval.They are
quite similar
and i think they can be combined into one function in the future. Initinput
allows us
to control our player to move.In initPhysics function, we add many
collisionhandler to handle
the collision. At lase, using a main function to launch the game.

2. AllStarBattleFactory: in this class, we store our entities information
and properties
and use them in the main class by calling "Spawn ..." Every entity can add
properties
like HP,Gametype, level, which entity it can have collision and what effect
it will have.

3. Config ,Dir, Gametype, PropsType, PropsType_forHiddenLevel: They are
list class, just to simplify the codes and make it clear.

4. UI package: Different ui that would apply in the game, like loading
scene, main_menu scene, success Scene...

5. Effect package: Used for some props' effects. Godeffect will make player
maintain current HP. PortalEffect will make player go through wall.

6. db package: Mainly used to connect to database MYSQL. It can verify
username and password.

7. components package: It will provide different component and properties
to entities, like how they would move, how do they shoot, restore hp after
geting a hp package...

8. collisions package: Probably the most important things in game. They are collision handlers, which will react to collision. This enables us to make the game reliable and enjoyable. They will detect bullet and other objects collision and decide whether objects will be ruined, and not allow two entity keep moving if they meet each other.